

JUN 26 2006

## Remarks

### I. Response to Rejection of Claims 1-20 Under 35 U.S.C. 112

#### A. Response to 35 U.S.C. 112 First Paragraph Objections to claims 1-20

The applicant understands the nature of the objections under 35 U.S.C. 112, first paragraph. Following are some arguments to clarify the applicant's position.

It appears that the main objection is to the term "pivot axes" used in independent claims 1, 5, and 13 as well as dependent claim 7. The examiner points out that the axes don't appear to pivot as shown in figures 1-3 and pages 7-9 of the specification.

##### 1. Specification Teaches that Pivot Axes can Lock or Rotate

The applicant would like to point out the second to last sentence of the ninth paragraph within the summary of the invention provided in the specification:

*Depending on the type of attachment the pivot axes can remain free to rotate or lock in place.*

The applicant argues that this clearly shows the claims contain subject matter that was described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

##### 2. The Specification Shows Pivot Axes that are Free to Rotate

The applicant wishes to point out that the first embodiment referred to in the objections is a very simple form used to explain the invention at its most basic state. Further embodiments shown in the specification use pivots that remain free to rotate at all times. The seventh embodiment as shown in figures 37-43 is a good example.

Furthermore, there is nothing shown in figures 1-3 that indicate the pivots would remain fully locked in position under load as the structure is under stress. As in any basic truss structure, any allowed rotation at the joints will reduce bending stress in the links.

##### 3. As Claimed, the Invention Takes Full Advantage of the Basic Truss Structure

To engineers skilled in the art, the basic truss structure is defined as three links or elements attached together in a triangular shape with pin joints that are free to rotate (i.e., with pivot axes). Although at first glance, these joints appear to be fixed, this is far from the truth. Only by allowing the joints to pivot can you get a structure with pure tension and compression in the three elements and eliminate bending moments. As soon as friction is added into a joint, or if a fixed connection is used, bending loads begin to get transferred into the links or elements as the structure flexes under load.

As the invention is claimed, with pivot axes, it takes full advantage of this structural phenomenon. To claim an axis as fixed may describe a lesser structure.

Through the numerous embodiments shown in the specification, the applicant clearly shows fully rotationally free joints at each of the three pivot axes.

### **B. Response to 35 U.S.C. 112 Second Paragraph Objections to Claims 1-20**

The applicant understands the nature of the objections under 35 U.S.C. 112, second paragraph. Following are some arguments to clarify the applicant's position.

#### **1. Specification Teaches That Pivot Axes can Lock or Rotate**

Again, the applicant would like to again point out the second to last sentence of the ninth paragraph within the summary of the invention provided in the specification:

*Depending on the type of attachment the pivot axes can remain free to rotate or lock in place.*

The applicant argues that the specification clearly explains that a pivot axis does not have to be pivoting at all times.

#### **2. An Axis that Pivots at Any Point in Time Could be a Pivot Axis**

The applicant argues that the term pivot axis is not misdescriptive. In each embodiment, the pivot axes rotate at some point in time while you are using the invention. While they may not be pivoting significantly while you ride the bike, they are pivoting during assembly and adjustment. As taught in the specification, even if fully locked, the pivot axes aren't always pivoting but they certainly have pivoted.

#### **3. Eliminating a Pivot Axis Would Decrease Functionality**

If any one of the pivot axes were not allowed to pivot at some point during the use of the invention, assembly and adjustment would be further limited.

#### **4. The Basic Truss Structure has Three Pivot Axes**

As described above, the basic truss structure as known to those skilled in the art, works best when it has three free rotating joints. Therefore, the description of the triangular truss structure having three pivot axes in the claims should not be unclear to anyone skilled in the art. Furthermore, real world truss structures are commonly assembled with threaded fasteners or rivets similar to the invention where the joints may be tight or locked in place but may slip slightly under load.

To one skilled in the art, the applicant argues that as claimed, using the terms rigid, three links, truss, and three pivot axes, together, a clear description of the invention has been provided.

#### **5. The Term Conventional Will Be Removed From Claim 5**

Applicant understands the issue with the term "conventional" and will remove it from claim 5.

## **II. Response to Rejection of Claims Under U.S.C. 102**

### **A. Response to Rejection of claims 1-3 and 5-11 Under U.S.C. 102 Regarding Lemmen(US-5,536,070):**

As the applicant and the examiner agreed during the interview on 28 of February, 2006, Lemmon (5,536,070) does not show (claim 1) a rigid, cycle seat clamping assembly for attaching a seat to a cycle comprising a quill link having a cycle seat post for attachment to the cycle at one end, a clamp link for attachment of the seat, and a support link for providing support between said quill link and said clamp link, each of the links having means for attachment to each other in a triangular truss configuration having three pivot axes, or (claim 5) a rigid, cycle seat clamping assembly for attaching a seat to a cycle comprising a quill link having a cycle seat post for attachment to the cycle at one end, a clamp link for attachment of the seat, and a support link for providing support between said quill link and said clamp link, each of the links having means for attachment to each other in a triangular truss configuration having three pivot axes, as claimed by the applicant.

During the interview of 28 February, 2006, the examiner and the applicant agreed that by adding the phrase "having three pivot axes" to claim 1 the objections under 35 U.S.C. 102 would be removed. Although in the interview summary provided by the examiner, the phrase was mis-typed as "having a three point axis", the applicant argues the phrase agreed upon was as stated above. To support this, the applicant wishes to point out that three points are never required to define an axis, only two.

Lemmen shows no truss structure, no three links and it's not attached in a configuration with three pivot axes.

## **III. Response to Rejection of Claims Under 35 U.S.C. 103**

### **A. Response to Rejection of Claims 4 and 12 and 13-20 Under U.S.C. 103(a)**

The applicant argues that with an understanding of the arguments listed above, it is clear that the invention is patentable over Lemmon (5,536,070). Lemmon (5,536,070) does not show the use of all the claimed invention.

With respect to Herman (5,466,042), there is no assembly shown that has horizontal offset adjustment as defined by the applicant (see fig. 49). The applicants interpretation of the prior art as referred to in Fig. 2 of Herman's patent, adjusts seat angle and seat horizontal position, but not horizontal offset.

## Conclusion

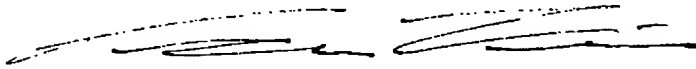
With the amendment detailed above, applicant respectfully submits that the claims have been amended to reverse the claim rejections under U.S.C. 112, 102, and 103. The claims define over the prior art under section 102 and are of patentable merit due to new results under section 103.

Applicant has amended claims 1, 5, and 7 by removing the word "pivot" and replacing it with "pivotable" to further clarify the nature of the axes being described. As a further suggestion, the applicant would be willing to remove the word "pivotable" and simply use the phrase "having three axes". This may clarify the claims further.

With this amendment and a good understanding of the arguments presented the examiner will find the applicants' invention is patentable over Lemmen.

Applicant submits that this application is now in full condition for allowance, which action applicant respectfully solicits.

Respectfully submitted,



Kevin Tisue  
Applicant pro se  
405 Parkview Drive  
Park City, UT 84098  
801-403-6409  
435-658-1778 Fax  
[ktisue@nextdimengineering.com](mailto:ktisue@nextdimengineering.com)